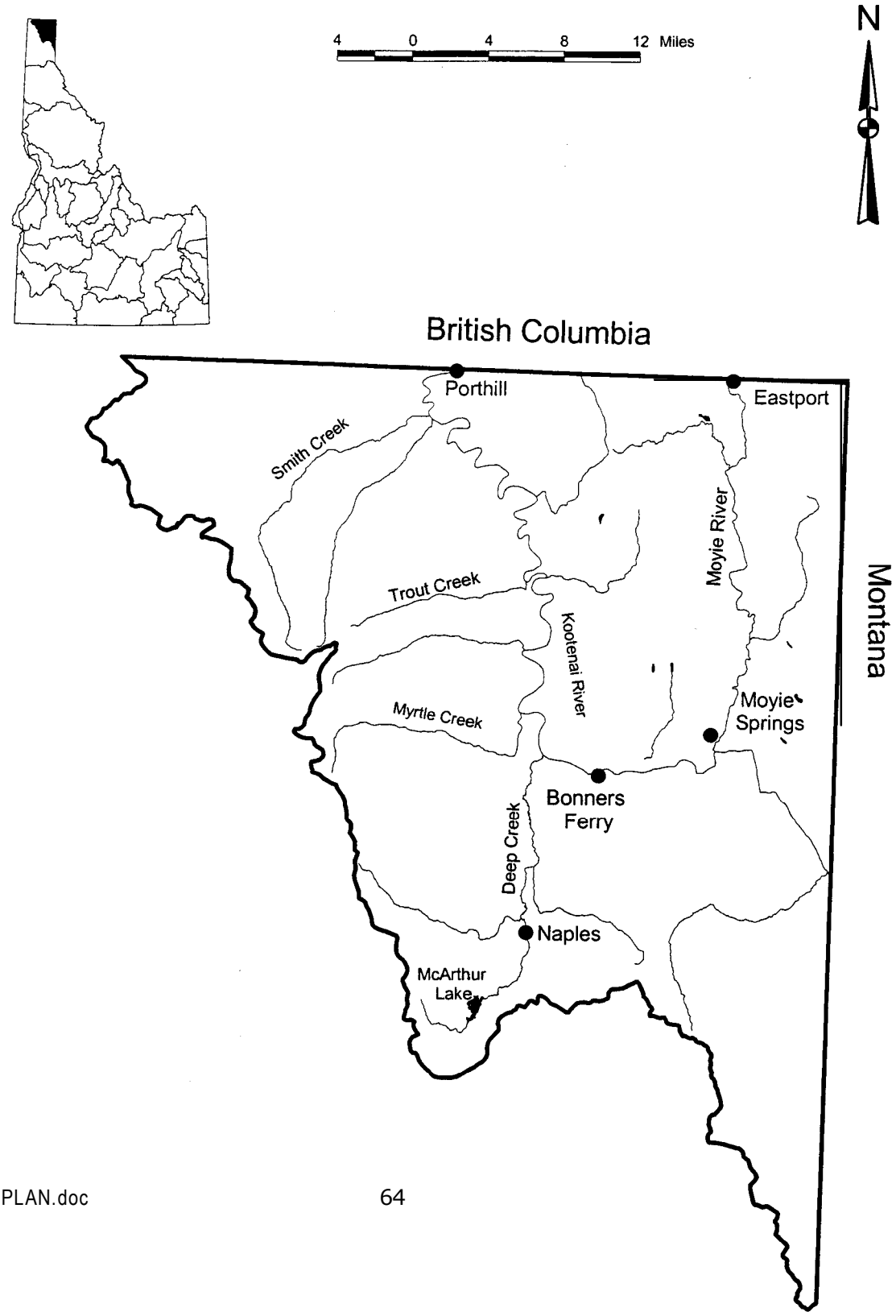
Kootenai River Drainage



1. KOOTENAI RIVER DRAINAGE

A. Overview

The Kootenai River is located at the north end of the Idaho Panhandle in Boundary County. It originates in southeastern British Columbia, flows south and west through Montana, and northwest through Idaho, then returns to Canada where it flows through Kootenay Lake and joins the Columbia River at Castlegar, British Columbia. At the International border at Porthill, Idaho, it drains approximately 13,700 square miles with an average discharge of 16,100 cfs. The 66 miles of river in Idaho can be divided into two reaches. The 47-mile section from Porthill to Bonners Ferry is a slow moving, broad, meandering river with holes up to 100 feet deep. A dam at the outlet of Kootenay Lake affects water level in the river as far upstream as Bonners Ferry. The 19 miles of river upstream from Bonners Ferry to Montana flows in a canyon with an average gradient of 3 feet/mile.

Libby Dam was constructed in Montana in March 1972, and its operation for flood control and power production has changed the natural seasonal and daily flow, temperature and productivity regimes in the Kootenai River. Mean flows during spring runoff have been reduced 50 percent and wintertime flows have tripled. Average wintertime water temperatures have increased by about 7^{o}F, resulting in the river remaining virtually ice free. Sediments trapped in the impoundment have dramatically reduced turbidity and the availability of important nutrients in the river and lake.

The Kootenai River is the only drainage in the State of Idaho where burbot (ling) are native. The Kootenai is also home to a genetically distinct population of white sturgeon. Fisheries for both of these species have been closed in response to major declines in these populations. The Kootenai River white sturgeon was listed as an Endangered Species on September 7, 1994. Burbot were petitioned for listing on February 2, 2000. Alteration of the natural flow regime, on an annual basis for flood control and daily or weekly basis for power production, is believed to be the primary reason for the lack of successful reproduction of sturgeon and burbot. Reductions in river productivity and elimination of former sloughs are also suspected of contributing to their decline.

Numerous tributaries drain the Selkirk and Purcell mountain ranges and enter the Kootenai River directly or through larger tributaries. Due to past glaciation, most Kootenai River tributaries are blocked by falls near their mouths, and recruitment of fish from tributaries is limited.

Habitat alteration and degradation have reduced trout production in naturally accessible portions of tributaries. Sedimentation from logging, roading, and wildfires has degraded former spawning and rearing areas. Manmade obstructions, diversions, and channelization have eliminated and isolated former trout habitat completely, especially in tributaries draining the west side. The Deep Creek and Boundary Creek drainages are the largest accessible tributaries of the Kootenai River.

The trout fishery in the Kootenai River is currently depressed due to limited natural production, impacts from daily, weekly and annual flow changes, and reduced river productivity. Changes in Libby Dam operations for sturgeon should incorporate the needs of all native fish to help restore a more natural river ecosystem. Improvements in

tributary spawning and rearing habitat conditions will be necessary to increase natural recruitment. Restrictive regulations on trout may also be needed to increase spawning escapement once tributary habitat is restored and to allow fish to reach a larger size. Similar efforts must also be considered in connecting waters in Canada and Montana. Some rainbow trout in the Deep Creek drainage were shown to utilize Deep Creek for spawning and rearing, but spent their adult life in Kootenay Lake, British Columbia, Canada (an adfluvial life cycle).

The Moyie River is the largest tributary of the Kootenai drainage in Idaho, but is isolated from the Kootenai River by a dam and natural falls near its mouth. The Moyie originates at Moyie Lake in British Columbia and flows 58 miles through Canada and 26 miles through Idaho. Historically, the Moyie River was managed primarily as a put-and-take trout fishery, but concerns about potential fish disease impacts in Canadian waters up and downstream and poor returns of hatchery stocked rainbow trout, resulted in a change to wild trout management in 2000. The river above Meadow Creek has a relatively flat gradient with relatively few pools. Additional pools were created with rock grade control structures and bank barbs as mitigation for the PGT natural gas pipeline construction impacts in 1992. The river gradient below Meadow Creek is much steeper, providing much better trout habitat. Most of the trout production for the upper river appears to come from Canadian tributaries due to the lack of suitable spawning and rearing tributaries in Idaho. Deer and Meadow Creek provide enough wild trout production to support the wild trout fishery in the lower river. Angler access is limited in the upper river to several bridge crossings and two Forest Service campgrounds and in the lower river by only a few primitive drive-to access sites. The lack of angler effort is one reason the Moyie River can currently support a wild trout fishery with limited recruitment.

Inland (redband) rainbow trout are native to the Kootenai River drainage and are present in the mainstem Kootenai River and above barriers in some tributaries. Hatchery rainbow trout have been widely introduced throughout the drainage, and the only known pure strain redband in an accessible tributary are found in Callahan Creek. Other native salmonids include westslope cutthroat trout, bull trout, and mountain whitefish. Introduced brook trout are present throughout the drainage, and a few remnant early spawning kokanee from Kootenay Lake, British Columbia, are present in the mainstem Kootenai River and some west side tributaries during the summer and fall. The Kootenai Tribe has recently supplemented these runs with kokanee from the North Arm of Kootenay Lake (Meadow Creek stock). Eyed eggs have been planted in several west side tributary streams formerly used by South Arm stocks. Kokanee salmon also enter the Kootenai River from Libby Reservoir (Lake Koocanusa) during some years.

Nineteen mountain lakes in the Selkirk and Purcell ranges are stocked with trout fry on a rotating basis. Stocking densities have been adjusted to maximize fish growth at a given lake elevation. Only fry from disease free hatcheries are used to stock Kootenai drainage mountain lakes to address Canadian fishery management concerns. Only sterile cutthroat and rainbow trout fry are used to stock mountain lakes to reduce potential impacts to native fish populations downstream. Westslope cutthroat trout, rainbow trout, and brook trout are present in most of the stocked lakes, although four lakes are reserved for specialty species, such as grayling and golden trout. In a cooperative effort with Montana fishery managers, Callahan (Smith) Lake will only be stocked with grayling to minimize impacts to native redband rainbow in Callahan Creek.

There are many alpine lakes located in the Kootenai drainage that currently do not support fish, either due to natural conditions or because they are no longer stocked. We will maintain these lakes in a fishless condition in order to maintain some natural alpine lake ecosystems for amphibians and invertebrates.

Numerous natural lowland lakes provide a mixed bag fishery for trout and spiny-rayed species. Naturalized populations of largemouth bass, black crappie, brown bullhead, yellow perch and pumpkinseed sunfish are present in most lakes. Channel catfish, tiger muskie and bluegill sunfish have been introduced in some lakes. Put-and-take rainbow trout and some kokanee salmon are stocked in these lakes to provide salmonid fisheries. Bonner Lake is managed as a quality trout fishery with a restrictive bag limit and season. At the request of the angling public, all Kootenai drainage lowland lakes are managed as electric motors only.

McArthur Lake offers some unique challenges due to the waterfowl production priority of this Department owned lake. The reservoir will be periodically drained to manage vegetation and enhance waterfowl production. This may actually enhance perch fishing by reducing the population and increasing subsequent growth of the fish that remain. Wild rainbow also utilize tributaries above the dam for spawning and rearing. A fish ladder on the dam allows adults access to these tributaries, but warm water in the reservoir may increase mortality of downstream migrating juvenile fish. Means of enhancing wild trout production should be investigated.

The majority of waters in the Kootenai drainage produce fishing for trout. The Kootenai River and its tributaries, mountain lakes, lowland lakes, and the Moyie River all provide quality trout fishing. Although numbers and size of fish have been reduced since the early 1900's, the area has potential for improved fishery management, especially the Kootenai River.

B. Objectives and Programs

1. Objective: Restore sport fish populations in the Kootenai River to self-sustaining levels capable of supporting an improved sport fishery.

   Program: Implement and evaluate in-river flows designed to provide spawning and recruitment of white sturgeon and burbot (ling). Continue research to identify the flow needs of other native species (rainbow, cutthroat, bull trout and whitefish) and modify Libby Dam operations to restore ecosystem function.

   Program: Evaluate the experimental release of nutrients and the effects on the fish community with emphasis on rainbow trout, bull trout and mountain whitefish.

   Program: Assess catch, catch rates and harvest of trout and modify regulations if required to improve the fishery.

2. Objective: Minimize impacts to and enhance trout spawning and rearing habitat.

Program: Work with government agencies, the Kootenai Tribe, private developers, interested angling groups and local schools to make protection and enhancement of fisheries habitat a primary concern in land use decisions.

3. Objective: Improve the efficiency of hatchery put-and-take trout stocking programs.

   Program: Evaluate rate of return, catch rate, and angler use on put-and-take trout fisheries through a routine data collection system.

   Program: Adjust rate, timing or location of trout stocking to improve rate of return to the creel.

   Program: Inform anglers of hatchery supported trout fishing opportunities through maps, brochures, media coverage and signing to improve return to the creel.

   Program: Discontinue put-and-take trout stocking in waters where a 40% or greater by number or 100% or greater by weight return to the creel cannot be met by the end of this planning period. Provide alternative fisheries to maintain angling opportunity.

   Program: Develop and utilize disease free, sterile stocks of rainbow and cutthroat trout to address concerns about potential impacts to wild trout.

4. Objective: Provide diverse angling opportunities in lowland lakes.

   Program: Continue periodic surveys of fish populations to monitor population status and fish growth in relation to physical and biological conditions and fishing regulations. Manage some lakes for specific fish species in order to maximize angling opportunity.

   Program: Maintain maximum harvest opportunity for warmwater species and stocked trout in most lakes while providing quality or trophy management fisheries in a few lakes where biological and physical conditions, and public support provide the right set of conditions for special management.

   Program: Continue maintenance stocking of tiger muskies and channel catfish to maintain popular fisheries. Evaluate channel catfish harvest to determine if harvest restrictions are needed to maintain this hatchery-supported fishery. Establish bluegill sunfish in select waters to diversify panfish populations.

5. Objective: Improve fishing and boating access.

   Program: Develop or enhance fishing and boating access areas through easements, cooperative agreements or purchase. Utilize funds to build fishing docks for shoreline anglers.

6. Objective: Curtail illegal introductions of fish. Illegal introductions of exotic fishes threaten the stability of other established fisheries.

   Program: Develop informational programs to educate anglers and the public to risks of random introductions of exotic species. Through planning, use enforcement efforts to curtail illegal introductions.

DRAINAGE: Kootenai River					
Water	Miles/acres	Fishery			Management direction
		Type	Species present	Management	
Kootenai River from Montana border to Canadian border	66/	Coldwater	Rainbow trout Cutthroat trout Mountain whitefish Kokanee	General	Work toward obtaining more favorable flows and restore productivity to improve habitat conditions for salmonids. Consider restrictive regulations to improve the trout fishery. Improve angler access.
			Bull trout	Conservation	Maintain harvest closure in river and tributary streams. Determine critical habitat and improve conditions.
			White sturgeon Burbot	Conservation	Identify factors that are causing depressed populations and implement recommendations from BPA-funded research.
Accessible tributaries to Kootenai River	130/	Coldwater	Rainbow trout Cutthroat trout Brook trout Kokanee	General	Enhance trout production for the Kootenai River by identifying critical streams, improving spawning and rearing habitat conditions, and modifying regulations if necessary. Work with the British Columbia and Kootenai Tribe fishery managers to restore kokanee.
			Bull trout	Conservation	Maintain harvest closure in tributary streams. Determine critical habitat and improve conditions.
Inaccessible tributaries to Kootenai River	300/	Coldwater	Rainbow trout Cutthroat trout Brook trout	Wild trout	Maintain limited consumptive fishery for small resident trout.
Moyie River	25/	Coldwater	Rainbow trout Cutthroat trout Brook trout	Wild trout	Maintain fishery for wild trout with restrictive regulations.
			Bull trout	Conservation	Maintain harvest closure in river and tributary streams. Determine critical habitat and improve conditions.
Moyie River tributaries	35/	Coldwater	Rainbow trout Cutthroat trout Brook trout	Wild trout	Maintain limited consumptive fishery for small resident trout. Seek ways to increase recruitment from tributary streams.
McArthur Reservoir	/800	Warmwater	Yellow perch Largemouth bass Pumpkinseed	General	Evaluate the effect of water level management on perch abundance and size, and maximize perch size within the constraints of waterfowl management. Investigate ways to improve wild rainbow trout production from tributary streams to enhance the Moyie River trout fishery.
			Rainbow trout Brook trout	Wild trout	

Smith, Brush, Bloom lakes	/77	Mixed	Rainbow trout Largemouth bass Yellow perch Black crappie Bluegill Pumpkinseed Bullhead Channel catfish	Put-and-take trout General	Stock put-and-take rainbow trout to enhance the trout fishery. Maintain access to Bloom Lake with an agreement with private landowners. Enhance the diversity of the warmwater fishery with maintenance stocking of channel catfish in Smith Lake.
Bonner Lake	/23	Mixed	Rainbow trout Largemouth bass Pumpkinseed	Quality General	Manage Bonner Lake as a quality trout fishery. Periodically rotenone to remove largemouth bass and pumpkinseed sunfish.
Robinson Lake	/60	Mixed	Rainbow trout Brook trout Largemouth bass Bluegill Pumpkinseed	Put-and-take trout Quality General	Stock put-and-take rainbow trout to enhance the trout fishery. Maintain restrictive regulations on largemouth bass to provide a quality bass fishery.
Dawson, Perkins Lake	/95	Warmwater	Tiger muskie Largemouth bass Black crappie Yellow perch Bluegill Pumpkinseed Bullhead Channel catfish	Trophy General	Maintain tiger muskie stocking to provide a specialized trophy fishery. Channel catfish will persist in Dawson Lake during this planning period, but maintenance stocking was shifted to Smith Lake to provide a better fishery.
Solomon, Sinclair lakes	/13	Coldwater	Rainbow trout	Put-and-take trout	Provide year-around consumptive fishery for trout by stocking put-and-take rainbow trout.
Alpine lakes (19 stocked lakes in the Kootenai River drainage)	/260	Coldwater	Cutthroat trout Rainbow trout Brook trout Golden trout Grayling	General	Continue maintenance stocking of trout fry to provide fisheries that are consistent with lake productivity and angler pressure. Use westslope cutthroat trout for cutthroat trout stocking and disease-free sterile rainbow trout. Reserve some lakes for specialty fish (golden trout and grayling) only. Do not stock lakes that are currently fishless in order to maintain some natural alpine lake ecosystems.